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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/088,366

07/11/2002

Udo Pursche

P/63002-PCT

1748

156

7590

09/27/2006

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NEW YORK, NY 10017

EXAMINER

LUU, AN T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/088,366

Applicant(s)

PURSCHE, UDO

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 4-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

An amendment on 7-27-06 has been received and entered in the case. The rejections set forth in the previous Office Action are revised to reflect amendment of claim as indicated below.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Brauns reference (U.S. Patent 5,900,747) in view of the Ohe et al reference (US Patent 6,256,876).

Brauns discloses in his sole figure an apparatus comprising at least two series-connected diodes (D1, D2); a repeating coil (transformer Tr) for feeding a reference signal (fr) to the diodes; a decoupling network (R1, R2, C3, C4) via which an input signal (fo) is placed on the diodes, and an output signal (fd) is tapped off the diodes; and planar line structure reactances (Rs1, C1, L1, Rs2, C2, L2) between the diodes and the repeating coil for balancing respective voltages on the diodes as partially required by claim 4. As to newly added limitations “for use over a temperature range”, it is seen as an intended use which is not given patentable weight. As to the limitations “having a temperature-dependent drift” and “in order to minimize variations in the output signal during changes in ambient temperature”, they are seen as results derived from the recited structure.

Brauns does not disclose the reactances being adjustable by means of laser evaporation as specifically required the claim. However, it would have been obvious to one skilled in the art at the time the invention was made to replace reactances with adjustable reactances since reactances is known to come various sizes and/or values. As to changing dimension of planar line reactances by laser evaporation, it is a known method of trimming electronic device (See Ohe et al, col., 5, lines 33-38). A skilled artisan in the art would have been motivated to utilized laser trimming method taught by Ohe to adjust reactances in Braun since Ohe's method would provide trimming without degrading the quality of the electronic components.

A skilled artisan in the art would have been motivated to do the above substitution since adjustable reactances can provide further control so as to offset other circuit component induced non-linearities so as to enhance the linearity performance of the circuit.

As to claim 5, the sole figure shows the decoupling network comprising resistors,(R1, R2) and capacitors (C3,C4).

As to claims 6-9 and 12, the sole figure working resistors (Rk1, Rk2) connected in series with the diodes, both working resistors being connected together at a connection point with a fixed potential (i.e., GROUND), and feed lines between the repeating coil and the diodes (i.e., line having Rs1, L1, Ck1 and line having Rs2, L2, Ck2), each feed line having at least one of the reactances therein and being connected between a respective diode and a respective working resistor.

As to claim 11, coil Tr of the sole figure is shown as a transformer.

As to claim 10, Brauns does not disclose an adjustable transformer as required by the claim. However, it would have been obvious to one skilled in the art at the time the invention

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was made to incorporate an adjustable transformer into the teachings of Brauns to enhance range and/or capability of the teachings since adjustable transformer is a known device. A skilled artisan in the art would have been motivated to utilized the adjustable transformer for the benefit of being used for controlling the amplitude of the voltage such that the above apparatus can be applicable with a wider range of input signal.

### *Response to Arguments*

3. Applicant's arguments filed 7-27-06 have been fully considered but they are not persuasive.

Applicant has argued that "it is not obvious to make the reactances adjustable, as this will increase the chance of the reactances falling out of symmetry". Examiner respectfully disagrees since using an adjustable device in place of a fixed device has advantages such as compensating of manufacturing process, operation temperature, and/or wide range of operation. Apparently, an ordinary skilled in the art would exercise care to achieve a desired value, including but not limited to symmetry as required by a particular application. As to using laser evaporation for changing dimension of the reactances, this is a known method in the art for trimming electronic device. Applicant even admits that laser trimming is a known method since the specification disclose "adjustments can occur by varying the lines by means of a laser or soldering or bonding on of additional line sections" without further elaborating. In other word, claim 4 including amendment of the limitation "laser tuning" still reads on the prior arts as noted above.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

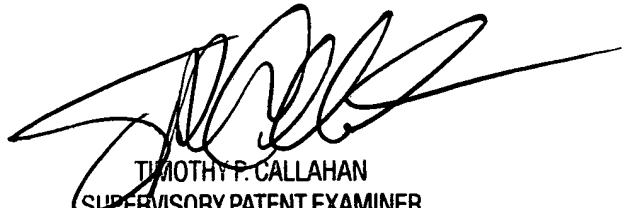
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

An T. Luu

9-15-06 

  
TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800